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**Search Results** - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6451573 B1

L2: Entry 1 of 3 File: USPT Sep 17, 2002

US-PAT-NO: 6451573
DOCUMENT-IDENTIFIER: US 6451573 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: September 17, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/213; 435/219, 435/252.3, 435/320.1, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/278, 800/295

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 2. Document ID: US 6261821 B1

L2: Entry 2 of 3 File: USPT Jul 17, 2001

US-PAT-NO: 6261821
DOCUMENT-IDENTIFIER: US 6261821 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: July 17, 2001

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/219; 435/213, 435/252.3, 435/320.1, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/279

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 3. Document ID: US 6031087 A

L2: Entry 3 of 3 File: USPT Feb 29, 2000

US-PAT-NO: 6031087
DOCUMENT-IDENTIFIER: US 6031087 A

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: February 29, 2000

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 536/23.2; 435/213, 435/219, 435/252.3, 435/320.1, 435/69.1, 536/23.6, 800/279

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

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| Terms | Documents |
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L2: Entry 1 of 3 File: USPT Sep 17, 2002

US-PAT-NO: 6451573
DOCUMENT-IDENTIFIER: US 6451573 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: September 17, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
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| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/213; 435/219, 435/252.3, 435/320.1, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/278, 800/295

CLAIMS:

What is claimed is:

1. A recombinant type II serine proteinase inhibitor (PI) precursor, wherein said PI precursor comprises at least three PI monomers covalently linked to each other, at least one of the monomers has a chymotrypsin specific site and at least one other of the monomers has a trypsin specific site, and wherein said precursor comprises an amino acid sequence as set forth in SEQ ID NO: 3.

2. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, and SEQ ID NO: 10.

3. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 4.

4. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 5.

5. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 6.

6. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 7.

7. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 8.

8. A monomer of the PI precursor according to claim 1, wherein said monomer comprises an amino acid sequence as set forth in SEQ ID NO: 9.

9. A monomer of the PI precursor according to claim 1, wherein said monomer

comprises an amino acid sequence as set forth in SEQ ID NO: 10.

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L2: Entry 2 of 3 File: USPT Jul 17, 2001

US-PAT-NO: 6261821
DOCUMENT-IDENTIFIER: US 6261821 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: July 17, 2001

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/219; 435/213, 435/252.3, 435/320.1, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/279

CLAIMS:

What is claimed is:

1. An isolated protease-sensitive peptide comprising SEQ ID NO:16 XCPXXEEKKNDRICTNCCAGXKG (SEQ ID NO:16).

2. An isolated protease-sensitive peptide comprising residues 2-23 of SEQ ID NO:16.

3. An isolated protease-sensitive peptide comprising residues 6-11 of SEQ ID NO:16.

4. An isolated protease-sensitive peptide comprising residues 6-20 of SEQ ID NO:16.

5. An isolated nucleic acid molecule encoding the peptide of any one of claims 1-4.

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**End of Result Set**

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L2: Entry 3 of 3 File: USPT Feb 29, 2000

US-PAT-NO: 6031087
DOCUMENT-IDENTIFIER: US 6031087 A

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: February 29, 2000

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 536/23.2; 435/213, 435/219, 435/252.3, 435/320.1, 435/69.1, 536/23.6, 800/279

CLAIMS:

We claim:

1. An isolated nucleic acid comprising a sequence of nucleotides which encodes or is complementary to a sequence which encodes a type II serine proteinase inhibitor (PI) precursor from a plant wherein said isolated nucleic acid has the nucleotide secuence set forth in SEQ ID NO:1 or hybridizes to the nucleotide sequence set forth in SEQ ID NO:1 under the conditions of at least one of 4.times.SSC at room temperature, 2.times.SSC at room temperature, 1.times.SSC at 40.degree. C., 2.times.SSC with 0.1% w/v SDS at 68.degree. C., or 0.2.times.SSC with 1% w/v SDS at 68.degree. C., wherein said precursor comprises at least three PI monomers and wherein at least one of said monomers has a chymotrypsin specific site and at least one of said monomers has a trypsin specific site.

2. An isolated nucleic acid according to claim 1 wherein said PI precursor comprises at least four monomers.

3. An isolated nucleic acid according to claim 1 wherein the PI precursor comprises at least five monomers.

4. An isolated nucleic acid according to claim 1 wherein the PI precursor comprises at least six monomers.

5. An isolated nucleic acid comprising a sequence of nucleotides according to claim 1 which encodes or is complementary to a sequence which encodes a single type II serine proteinase inhibitor (PI) having either a chymotrypsin specific site or a trypsin specific site and wherein said PI is a monomer of a precursor PI having at least three monomers of which at least one of said monomers has a chymotrypsin site and the other of said monomers has a trypsin site.

6. An isolated nucleic acid according to claim 1 or claim 5 which encodes a

peptide selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO: 8, SEQ ID NO:9, or SEQ ID NO:10.

7. A method of increasing or enhancing resistance of a plant to insect or other pathogen infestation, said method comprising introducing a nucleic acid molecule as defined in any one of claims 1, 2, 3, 4, or 5 into a cell or group of cells of said plant, regenerating a plant therefrom and growing said plant for a time and under conditions sufficient to permit expression of said nucleic acid into a proteinase inhibitor (PI) or precursor thereof which inhibits growth and infestation by said pathogen.

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**Search Results** - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 6440727 B1

L1: Entry 1 of 1 File: USPT Aug 27, 2002

US-PAT-NO: 6440727
DOCUMENT-IDENTIFIER: US 6440727 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: August 27, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/320.1; 435/213, 435/219, 435/252.3, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/278, 800/295

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

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| Terms | Documents |
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**End of Result Set**

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L1: Entry 1 of 1 File: USPT Aug 27, 2002

US-PAT-NO: 6440727
DOCUMENT-IDENTIFIER: US 6440727 B1

TITLE: Proteinase inhibitor, precursor thereof and genetic sequences encoding same

DATE-ISSUED: August 27, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Anderson; Marilyn Anne | Keilor | | | AU |
| Atkinson; Angela Hilary | Montrose | | | AU |
| Heath; Robyn Louise | Williamstown | | | AU |
| Clarke; Adrienne Elizabeth | Parkville | | | AU |

US-CL-CURRENT: 435/320.1; 435/213, 435/219, 435/252.3, 435/69.1, 536/23.1, 536/23.2, 536/23.6, 800/278, 800/295

CLAIMS:

What is claimed is:

1. A genetic construct comprising a nucleotide sequence which encodes or is complementary to a sequence which encodes a type II serine proteinase inhibitor (PI) precursor from a plant or monomer of said PI precursor, wherein said nucleotide sequence is a sequence as set forth in SEQ ID NO: 1 or a sequence which hybridizes to the complement sequence of SEQ ID NO: 1 under the conditions of at least one of 4.times.SSC at room temperature, 2.times.SSC at room temperature, 1.times.SSC at 40.degree. C., 2.times.SSC with 0.1% w/v SDS at 68.degree. C., or 0.2.times.SSC with 1% w/v SDS at 68.degree. C., wherein said precursor comprises at least three PI monomers and wherein at least one of said monomers has a chymotrypsin specific site and at least one of said other monomers has a trypsin specific site, and wherein said genetic construct further comprises expression means to permit expression of said nucleotide sequence, replication means to permit replication in a plant cell, or integration means to permit stable integration of said nucleotide sequence into a plant cell genome.

2. A transgenic plant carrying a genetic construct, said genetic construct comprising a nucleotide sequence which encodes or is complementary to a sequence which encodes a type II serine proteinase inhibitor (PI) precursor from a plant or monomer of said PI precursor, wherein said nucleotide sequence is a sequence as set forth in SEQ ID NO: 1 or a sequence which hybridizes to the complement sequence of SEQ ID NO: 1 under the conditions of at least one of 4.times.SSC at room temperature, 2.times.SSC at room temperature, 1.times.SSC at 40.degree. C., 2.times.SSC with 0.1% w/v SDS at 68.degree. C., or 0.2.times.SSC with 1% w/v SDS at 68.degree. C., wherein said precursor comprises at least three PI monomers and wherein at least one of said monomers has a chymotrypsin specific site and at least one other of said monomers has a trypsin specific site.

3. The transgenic plant according to claim 2 wherein said transgenic plant

produces one or more PI monomers selected from the group consisting of SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9 and SEQ ID NO: 10.

4. The transgenic plant according to claim 2 wherein said transgenic plant produces a PI monomer consisting of SEQ ID NO: 4.

# EBI Generic DB Entry Retrieval

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RA   Miller E.A., Lee M.C.S., Atkinson A.H.O., Anderson M.A.;
RT   "Identification of a novel four-domain member of the proteinase inhibitor
RT   II family from the stigmas of Nicotiana alata";
RL   Plant Mol. Biol. 42(2):329-333(2000).
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RN   [2]
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RA   Miller E.A., Atkinson A.A., Anderson M.A.;
RT   ;
RL   Submitted (10-NOV-1998) to the EMBL/GenBank/DDBJ databases.
RL   Biochemistry, LaTrobe University, Plenty Rd, Bundoora, Vic 3083, Australia
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